Pest Update (September 8-15, 2010)

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Note: samples containing living tissue may only be accepted from South Dakota. Please do not send samples of dying plants or insect from other states. If you live outside of South Dakota and have a question, please send a digital picture of the pest or problem instead. **Walnut samples may not be sent in from any location – please provide a picture instead**.

Available on the net at:
http://sdda.sd.gov/Forestry/Educational-Information/PestAlert-Archives.aspx

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Fall color is soon to come

We will soon be entering the fall color time period so just a couple of items relating to this seasonal phenomenon. First the color changes begin in response to the shortening days and the cooler temperatures. The leaves stop producing chlorophyll (the green color) and some trees species at the same time begin producing anthocyanin (the red-purple colors) in their leaves. Yellows (carotene and xanthophylls pigments) also begin to appear, not because the tree is beginning to produce them – in fact they are always present – but as chlorophyll disintegrates these pigments are unmasked.

Trees noted for their brilliant red fall color include red and sugar maples (as well as the freeman maples and the three-flower maple shown in the picture taken last fall), serviceberry, sumac and red oaks. Trees that have bright yellow fall color include ginkgo, quaking aspen and as well as the 'Harvest gold' Mongolian linden. Many other species such as catalpa, sycamore and black locust have little color change.

Fall color is best when we have combination of dry, sunny and cool weather during autumn. Rainy, cloudy weather will reduce the intensity of fall color. Considering the almost constant rains in eastern South Dakota this year we may have a poor color season in much of the state.

Current concerns

Spruce spider mite becomes active about the time maple leaves begin to color. The spruce spider mite is a cool season mite so it is active in the spring and fall. The damage is most noticeable during the summer heat and that is when the calls start coming in to our offices. However, the time to treat is coming very soon, not the summer.

Spruce spider mites have needle-like piecing mouthparts and injure conifers by sucking the fluids from cells in the needles. This injury appears as stippling and flecking of the needles and when infestations are heavy the entire needle will turn a yellow or bronze. The mites also produce a very fine webbing and during the growing season the best clues that mites might be the problem is to look at last year's twig and needles and

inspect for stippling, fine webbing and a small dark gray “dust” spots that are the cast skins to the mites. Occasionally I can even find a dead mite stuck onto a resin drop. Spider mites rarely kill trees but their feeding can result in the loss of the older needles and interior browning. However, there are lots of other stresses, both biotic and abiotic, that can cause similar symptoms.

Spruce spider mites overwinter as eggs and in the spring enter a larval then nymphal stage before becoming an adult. This cycle does not take very long and can be completed in less than a week. This is the reason for the common spray recommendation to make two treatments 10 days apart. Many pesticides do not kill the eggs and a single application of the pesticide may reduce the adult population but once the eggs hatch the population quickly rebounds. The populations develop the quickest during the cooler spring and fall weather and during much of the summer the mite is dormant and easy prey to other mites and insects. Treatment options are very limited for homeowners, horticultural oils and insecticidal soaps being the two most common, since these are the least likely to harm the many beneficial insects and mites that provide most of the control. These products, however, can turn a blue spruce green so use with caution unless the color change is not an issue. There are also some insecticides that provide some control of these mites, Malathion and acephate being two common active ingredients. These are really suppression treatments, not eradication, and Malathion is only mildly effective. They should be applied in about a week and then another treatment about a week later. Commercial applicators have more effective chemicals available, such as Forbid and I recommend contacting a professional if many tall trees need to be treated.

Information you can use

At this time of year I start getting sample of fungi and this is one picture that came in this week. This is one of the sulphur shelf fungi that occur on dead and dying oaks and ash throughout the state. They seem to appear almost overnight in September and are hard to miss due to their bright yellow and orange color. The fruiting body will fade to a more uniform pale yellow as it begins to weather but often the mushroom disappears as quickly as it forms. Sulphur shelf mushrooms are eaten by many animals and, when cooked properly, are considered delicious. They are also known as the “chicken of the woods” since some people think they taste like chicken (but what doesn’t?). However, **an important caution**, even assume any fungi you find is edible until it has been examined by an experienced mushroom hunter. Pictures are only a guide.

E-samples

I am receiving pictures and samples of linden leaves. This is a common occurrence at this time of year and there are several reasons for the discoloration of lindens. However, one of the most common is a disease called **linden leaf blotch**. The blotches begin to occur in late summer, often as small specks that expand to larger blotches. A characteristic of the dark brown blotches is the feathery margins. The disease often results in complete defoliation of the tree by mid-September. There really is no control other than remove and destroy the fallen leaves, often impractical, and if the spring is relatively dry the disease is often minor and only results in some leaf discoloration.

Samples received

Butte County **Please identify this tree and seed.**

This is the Ohio buckeye, *Aesculus glabra*. I usually get a lot of seeds from the tree mailed to me in the fall. Many people mistakenly believe the seeds are from a chestnut and they want to know how to roast them! These are not chestnuts and buckeye nuts are considered poisonous to livestock and humans due to the glucoside content (however, Native Americans used the nuts as food but they leached and roasted the nuts into a meal).

Butte County **What is causing the dieback on this Triumph elm?**

There was nothing on the sample to indicate the cause of the problem. Since this is a new cultivar that appears to be well adapted to much of the state I'd like to look at the tree on my next trip out to see if this might just be related to transplant stress or perhaps a problem that we need to be aware of when we are recommending trees for the state.

Campbell County **What is this plant and can you eat the berries?**

The leaves were dried and crushed but it certainly looks like a cranberrybush viburnum. These shrubs are now covered with clusters of bright red berries that you'll notice are not being quickly taken by the birds as the fruit is very sour! It is used in preserves and jams but you'll have to add a lot of sugar!

Faulk County **What is causing the leaf discoloration on the ash and linden?**

The linden has the leaf blotch disease mentioned under E-samples. It is hard to tell the problem from the sample sent in of the ash (and it is an ash, *Fraxinus*, not mountainash, *Sorbus*) but the accompanying pictures show a lot of bare branches and twigs and most likely the tree was hit hard by ash

anthracnose that occurred earlier this year. The extended period of cool, moist weather this past spring allow the disease to develop to almost unprecedented levels and many trees around the state suffered leaf loss and dieback. There are few very effective controls and if the spring weather turns warm and dry we rarely see much of the disease.

Kingsbury County **What is wrong with Gary's spruce?**

The needles had completely fallen off the twigs by the time they arrive. There was nothing on the needles to indicate a disease problem so I suspect the problem is further back on the twigs and branches and is the fungal disease cytospora canker. This disease will often result in the discoloration and needle cast from individual branches in a tree. I also see the disease begin to develop on trees that are about 15 to 20 feet tall and usually the lower branches are affected first. If they notice what appears to be "bird droppings" on the branches, bluish white resin, then it is the canker disease. Unfortunately there is not effective control other than prune out infected branches.

Yankton County **Is this maple anthracnose?**

Yes, on the darker Norway maple leaves, such as the ones submitted, you often find that the blotches are difficult to notice. Anthracnose diseases, such as this, are rarely treated as they rarely occur on the same trees from year to year.